

## CLAIMS:

1. A method of determining the focus of an optical system, which method comprises the steps of:
  - arranging the optical system between an illumination system and a radiation-sensitive detection system;
  - 5 - arranging a test object between the illumination system and the optical system;
  - imaging the test object by means of the optical system on the detection system, and
  - establishing the position of the focal plane from the modulation depth of the test object image, characterized in that the step of arranging a test object comprises arranging
  - 10 a first test object between the illumination system and the expected focal plane of the optical system and a second test object between this plane and the optical system system, whereby the first and second test objects are arranged at different locations with respect to the optical axis of the optical system, and in that the step of establishing focus comprises determining the modulation depth of each of the two test object images and subtracting the obtained
  - 15 modulation depth values from each other to obtain a difference value, which represents the position of focus with respect to the positions of the two test objects.
2. A method as claimed in claim 1, characterized in that focus is determined at different points in the field of view of the imaging system.
- 20 3. An apparatus for determining focus of an optical system, which apparatus comprises successively a radiation source for supplying an illumination beam, a test object, a location for the optical system to be measured, a radiation-sensitive detection system and processing means for processing signals from the detection system, characterized in that the
- 25 test object comprises two sub-objects, which are arranged at different sides of the expected best focus of the optical system and at different locations with respect to the axis of the apparatus, in that the radiation-sensitive detection system comprises separate detection areas for the images of the sub-objects and in that the processing means comprises means for calculating the difference in contrast of the images.

4. An apparatus as claimed in claim 3, characterized in that the sub-objects are gratings.
- 5 5. An apparatus as claimed in claim 4, characterized in that the gratings are arranged at the front side and the rear side, respectively of a transparent plate.
6. An apparatus as claimed in claim 3, 4 or 5, characterized in that an additional lens system is arranged between the optical system and the sub-object that is most close to
- 10 the optical system.